

ventiotec

THE ORGANIC EVAPORATOR OVD-3

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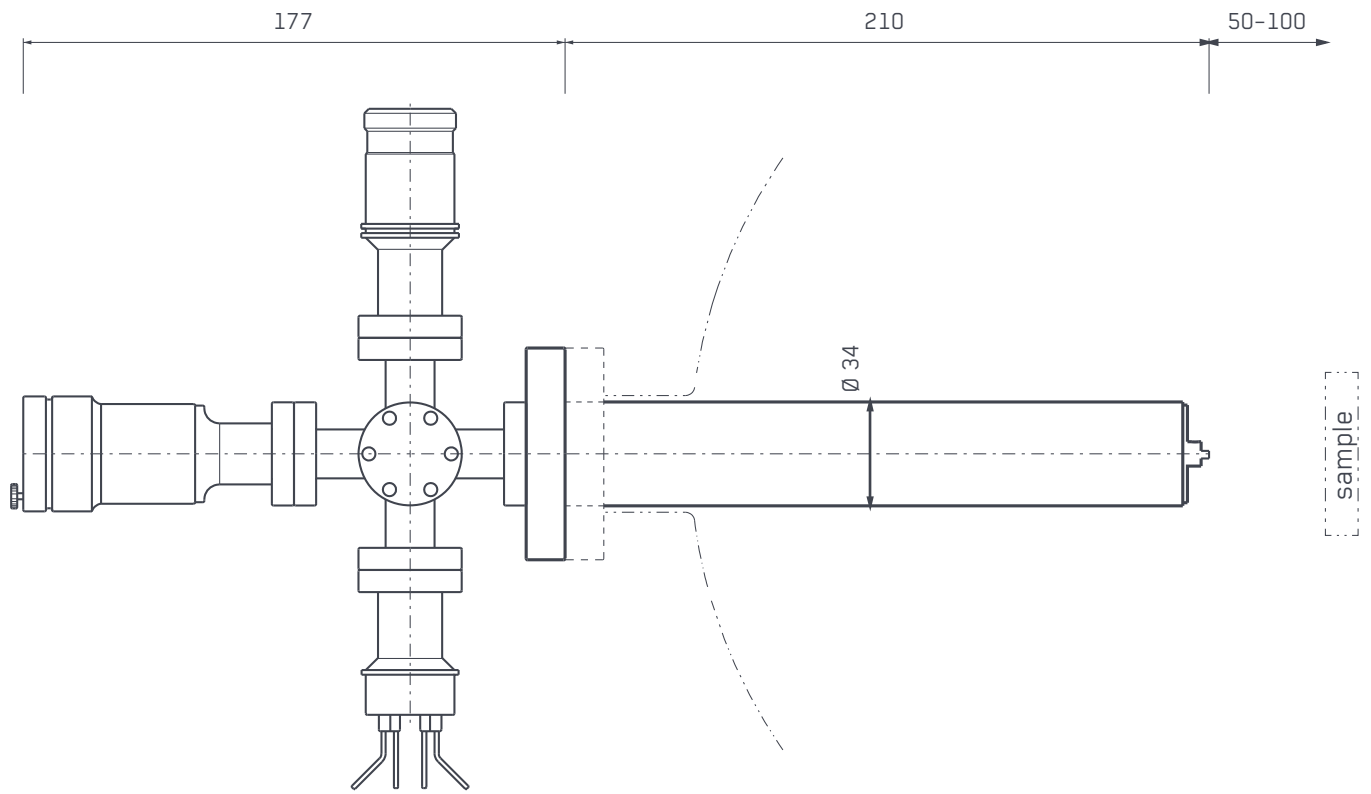
Layers of organic molecules have increasingly become the focus of the application-oriented surface science and chemistry. Not lastly, the growing efficiency of electronic components such as solar cells and displays, whose compounds are organic molecules, has greatly increased the demand for cost-effective evaporator cells for laboratory applications and small series production. However, conventional evaporator cells are mainly designed for a temperature range which is much too high, so that they can hardly be operated at temperatures at which organic molecules sublime in a vacuum.

With the organic evaporator OVD-3, Ventiotec offers a product which is optimized for this segment. Thanks to the compact design, three independently controlled evaporation units can be quickly heated up and again cooled down. In the process, the consistent shielding of the evaporator units minimizes the thermal crosstalk. The gas emission of the source is minimal even at 600°C and does not disturb the ultra high vacuum. The special design of the rotary aperture thereby allows for the simultaneous evaporation of one, two or three units. This guarantees the full flexibility with the smallest possible dimensions. The three-fold evaporator should be mounted to a standard DN35CF flange. The usage of CF flanges thus provides for the unrestricted application in the ultra-high vacuum.

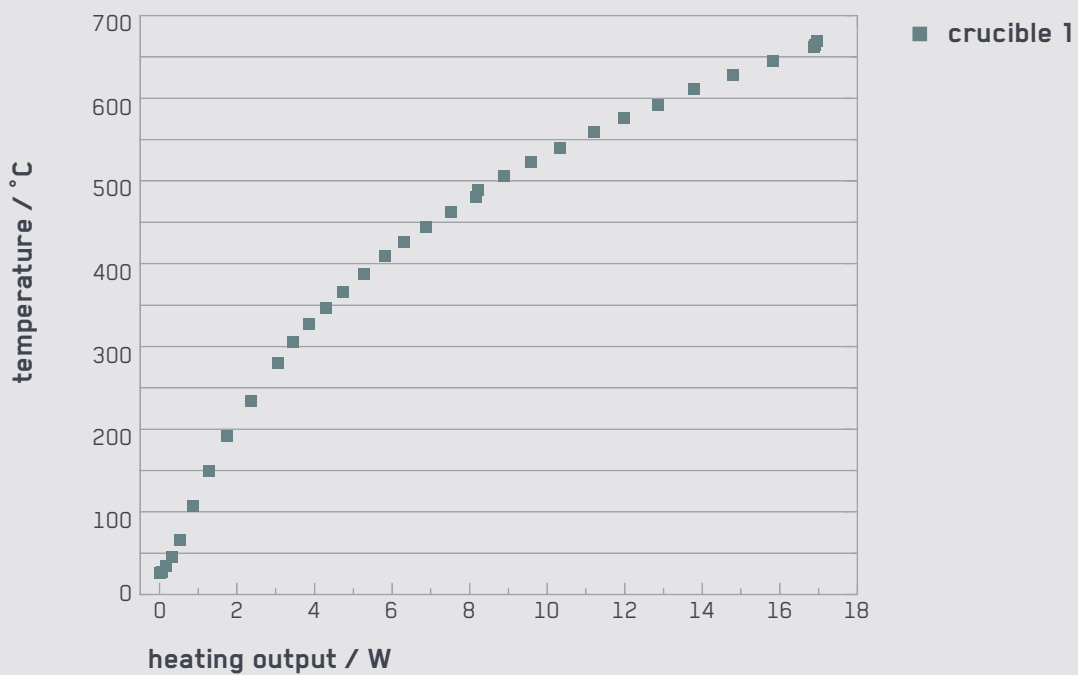
Precisely in laboratory applications, a quick change of the samples which are being prepared also poses an enormous time advantage. Therefore, a special version of the OVD-3 exists, which can be pumped down separately from the usual vacuum system using a by-pass. In this way, the evaporator can be dismantled from the usual vacuum system and filled separately. This assures a clean preparation of the layers. A high stability of the particle flux is guaranteed by the usage of a PID controller.

SPECIFICATIONS

- 3x quartz crucibles each with 30 mm³ filling volume
- Ta-filament direct electrical heating
- filaments can be controlled separately
- temperature range up to 600°C
- integrated shutter for the opening of one or two crucibles (standard)
- one type K thermocouple per crucible
- connection flange DN35CF
- working distance between flange and shutter: approx. 210 mm
- pump ports, linear adjustment and valves are available separately upon request
- working distance between shutter and specimen: 50 to 100 mm
- compatible with ultra-high vacuum
- suited for: Fullerene (C₆₀ or C₇₀),
Perylene derivatives (PTCDA, Dimethyl-PTCDI), Phthalocyanine (CuPc)



PERFORMANCE



INVENTION.CREATION.EXPLORATION

Ventiotec offers consultation and know-how for the research and development in the sector of surface science, especially in the nano technology. Ventiotec has one focus in the development of individual solutions for coatings (MBE) and their analysis.

Ventiotec is understood as a platform, on which new impulses, ideas, cooperation and initiatives are systematically further developed and conveyed. Ventiotec is equipped with an interdisciplinary team of specialists and generalists under the leadership of Dr. Thorsten Wagner [Dipl. Phys.] and Marcel Dolega [Dipl. Des., PMP]. Ventiotecs highest maxim is the transfer of know-how between branches, technologies and scientific disciplines. We bring new ideas, procedures and methods to your company. If required, we will use the comprehensive contacts of universities, institutions and partner companies.

Personal consultation is a matter of course for us. In case of questions, please call us or send an e-mail.

VENTIOTEC®

MARLER STRASSE 100-102
ALTE KOKEREI HASSEL
45896 GELSENKIRCHEN
GERMANY

FON +49(0)209-93090-34

FAX +49(0)209-93090-91

MAIL INFO@VENTIOTEC.DE

WEB WWW.VENTIOTEC.DE